

NOTE

SCIRPUS ANCISTROCHAETUS (CYPERACEAE): FIRST
RECORD IN CANADA

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A recent revision of material of *Scirpus atrovirens sensu lato* at the herbarium of the Université de Montréal has turned up an interesting discovery of *Scirpus ancistrochaetus* Schuyler from the Shawinigan region of Québec (valley of the Rivière Saint-Maurice). This discovery is based on a misidentified collection dating from 1934. It represents the first record of this species in Canada.

SPECIMEN CITATION: CANADA. Québec: Sainte-Flore (village), comté de Saint-Maurice, lac Mondor, Rive basse, 15 août 1934, *Gauthier 2231* (MT). The approximate coordinates are 46°37'N, 72°44'W.

Scirpus ancistrochaetus is a relatively unknown bulrush species that was first described by A. E. Schuyler in 1962 (Schuyler 1962). At the time, Schuyler discovered it in several widely isolated localities in the northeastern states of Vermont and Pennsylvania. Presently, it is known from about 60 localities scattered through the Appalachian region from southwest New Hampshire, adjacent Vermont, and New York to western Virginia. Within this fairly restricted area, it is listed by the United States Fish and Wildlife Service as a Federal Endangered species (USFWS 1991), because it is rare or endangered in all states where it is known to occur (Kartesz and Meacham 1999; Mitchell and Tucker 1997; NatureServe 2000; Royte and Lortie 2000; Strong 1994).

This bulrush has sparked considerable interest because of its relatively recent description and its rarity throughout its range. Several studies have been initiated in different states to better

evaluate its status and further document sites where it is known to occur (NatureServe 2000). Wherever it occurs, it seems that populations are small and several occurrences are only known historically. The state of Pennsylvania has the highest number of extant populations (Lentz 1998). To explain the isolated occurrences of this bulrush in the northeastern part of the continent, Schuyler (1962) has suggested that it may be a relict species that is persisting only in pockets of its former range.

The Québec specimen was previously identified as *Scirpus atrovirens* Willd. var. *georgianus* (R. M. Harper) Fernald. Plants by this name in our area are now referred to as *S. hattorianus* Makino, as distinct from *S. atrovirens sensu stricto* (Schuyler 1967). However, a closer examination of the specimen revealed that it was neither *S. hattorianus*, nor *S. atrovirens*. In fact, several well-marked characteristics described by Schuyler (1962, 1967) and Strong (1994) permit us to distinguish this species from the other members of the complex. The inflorescence rays of *S. ancistrochaetus* tend to droop more at maturity as opposed to the ascending rays of *S. atrovirens* and *S. hattorianus*. The rays are also antrorsely scabrous their entire length rather than smooth. The bristles of the achenes are more rigid with sharp-pointed, retrorse teeth that extend nearly to the base, while the bristles of *S. atrovirens* and *S. hattorianus* are weaker and have teeth that are finer and concentrated towards the tip of the bristle. To further complicate matters, hybridization has been reported to occur with *S. atrovirens* and/or *S. hattorianus* (Schuyler 1962, 1967).

In August 2000, a brief attempt was made by Hay to re-locate *Scirpus ancistrochaetus* at the Lake Mondor locality. The shoreline and adjacent wetland were explored, but although other closely related species such as *S. hattorianus* (2000-28, 29, MT) and *S. microcarpus* C. Presl (2000-24, 27, 30, MT) were common, no populations of *S. ancistrochaetus* were found.

The discovery of this species in Québec is a major extension in range from the previous most northern sites known in the Connecticut River Valley, and thus, continues to raise questions about the status and distribution of this unusual species. As our understanding of this species improves, further field exploration and a more exhaustive search of other herbarium specimens will likely uncover other new occurrences. Given what we know presently, and particularly because of its rare status throughout its range in

eastern North America, *Scirpus ancistrochaetus* should be added to the list of rare plants in Québec (Bouchard et al. 1983; Lavoie 1992) and Canada (Argus and Pryer 1990).

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LITERATURE CITED

- ARGUS, G. W. AND K. M. PRYER. 1990. Rare vascular plants in Canada—our natural heritage. Canadian Museum of Nature, Ottawa, ON, Canada.
- BOUCHARD, A., D. BARABÉ, M. DUMAIS, AND S. HAY. 1983. The rare vascular plants of Québec. Syllogeus 48. National Museum of Natural Sciences, Ottawa, ON, Canada.
- KARTESZ, J. T. AND C. A. MEACHAM. 1999. Synthesis of the North American Flora, CD-ROM version 1.0. North Carolina Botanical Garden, Chapel Hill, NC.
- LAVOIE, G. 1992. Plantes vasculaires susceptibles d'être désignées menacées ou vulnérables au Québec. Direction de la Conservation et du Patrimoine Écologique, Ministère de l'Environnement du Québec, Québec, Canada.
- LENTZ, K. A. 1998. Ecology of endangered northeastern Bulrush, *Scirpus ancistrochaetus* Schuyler. Ph.D. dissertation, Pennsylvania State Univ., University Park, PA.
- MITCHELL, R. S. AND G. C. TUCKER. 1997. Revised checklist of New York State plants. Bull. 490, New York State Museum, Albany, NY.
- NATURESERVE. 2000. An online encyclopedia of life [web application], version 1.1. Association for Biodiversity Information, Arlington, VA. Web Site (<http://www.natureserve.org/>).
- ROYTE, J. L. AND J. P. LORTIE. 2000. New records for *Scirpus ancistrochaetus* in New Hampshire. *Rhodora* 102: 210–213.
- SCHUYLER, A. E. 1962. A new species of *Scirpus* in the northeastern United States. *Rhodora* 64: 43–49.
- . 1967. A taxonomic revision of North American leafy species of *Scirpus*. *Proc. Acad. Nat. Sci. Philadelphia* 119: 295–323.
- STRONG, M. T. 1994. Taxonomy of *Scirpus*, *Trichophorum* and *Schoenoplectus* (Cyperaceae) in Virginia. *Bartonia* 58: 29–68.
- USFWS (UNITED STATES FISH AND WILDLIFE SERVICE). 1991. Endangered and threatened wildlife and plants; determination of endangered status for *Scirpus ancistrochaetus* (northeastern bulrush). *Fed. Reg.* 56: 21091–21096.